ODISHA
CBZ
ZONE
Debasish .....

LATE BLIGHT OF POTATO

Casual organism

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Phytophthora infestans

(an oomycete fungus-like pathogen)

Affecting :

- leaves
- stems
- tubers

Symptoms

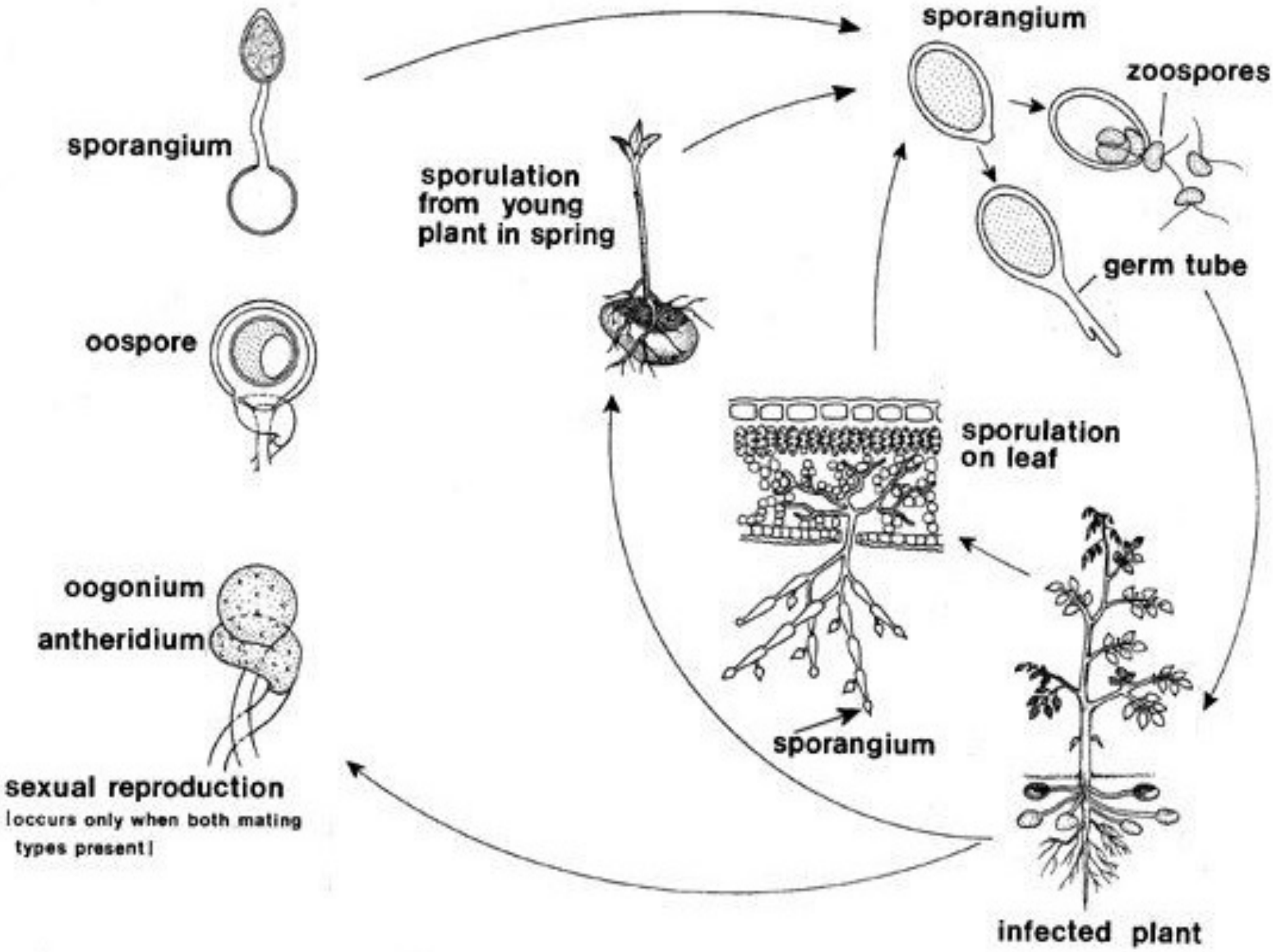
- **Leaves**:
  - Water-soaked, irregular lesions at leaf tips and margins.
  - Lesions enlarge rapidly, turning brown to black.
  - White fungal growth appears on the undersides during humid conditions.
- **Stems**:
  - Dark brown to black lesions that can girdle the stem.
- **Tubers**:
  - Irregular, sunken, brown to purplish spots on skin.
  - Internal flesh shows reddish-brown dry rot, often leading to soft rot with bacterial infection.

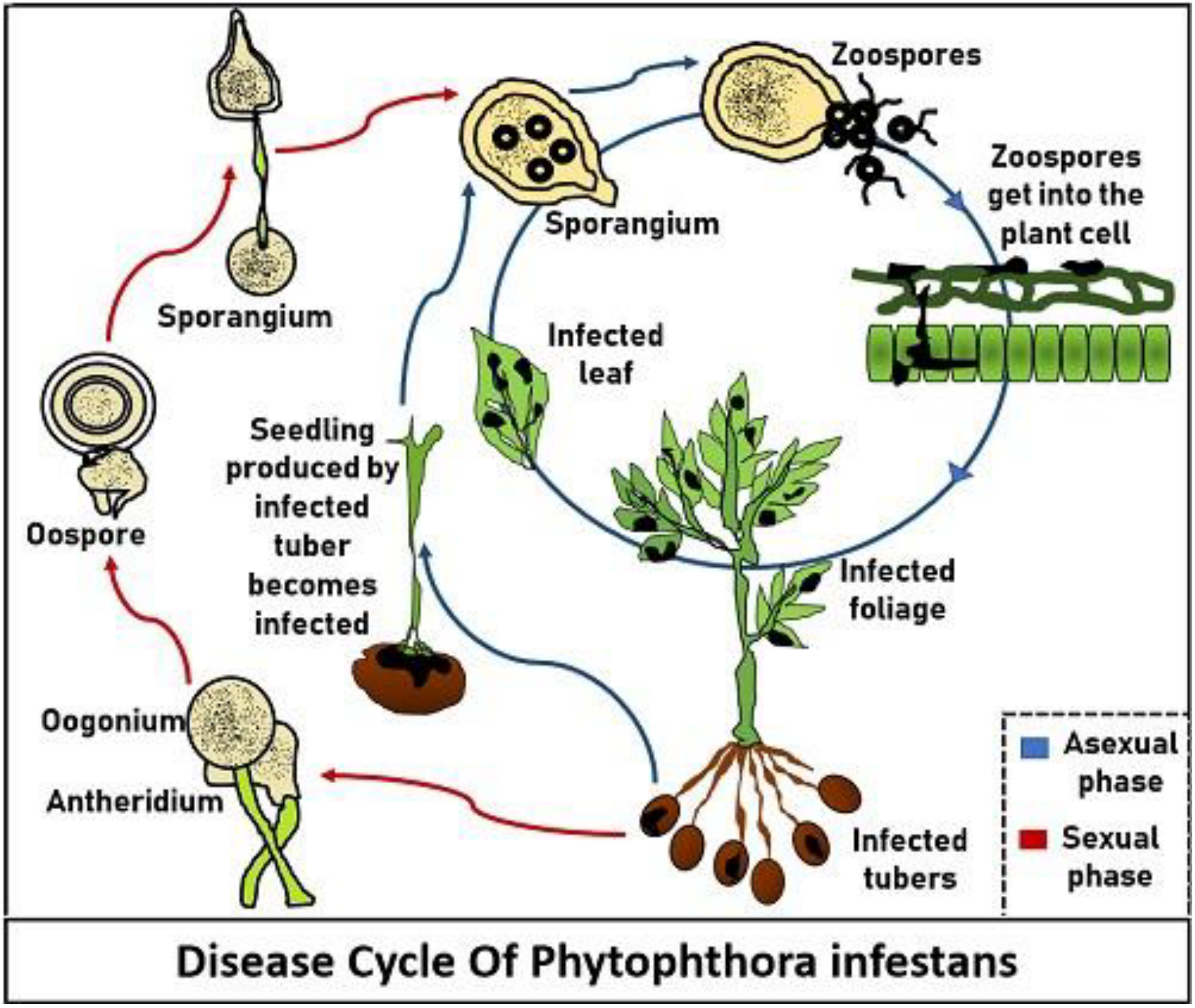
Life Cycle

1. Survives in infected tubers, soil, and plant debris.
2. Sporangia form on infected tissue in cool, moist weather.
3. Sporangia spread by wind and rain → infect leaves and stems.
4. Secondary infection occurs rapidly under high humidity.
5. Tubers get infected during harvest/storage if exposed.

Favourable Conditions

- Cool (15–20 °C), humid (90% RH) weather.
- Continuous rainfall and cloudy climate.


sporangium
oospore
oogonium
antheridium
sexual reproduction
(occurs only when both mating types present)
sporulation from young plant in spring
sporangium
zoospores
germ tube
sporulation on leaf
sporangium
infected plant



Disease Cycle Of Phytophthora infestans

Control Measures

Cultural

- Use healthy, certified seed tubers.
- Crop rotation (2–3 years).
- Destroy volunteer potato plants and cull piles.
- Ensure proper field drainage.
- Harvest in dry weather.

Chemical

- Preventive sprays with Mancozeb or Chlorothalonil.
- Systemic fungicides like Metalaxyl, Dimethomorph, or Cymoxanil in rotation.

Resistant Varieties

- Use resistant/tolerant potato varieties where available.

Notes

DEBASISH
COLLECTION